

**CLAIMS**

What is claimed is:

1    1. A method for controlling temperature in a hard disk drive during testing, the hard disk  
2    drive having two modes of operation, the method comprising:

3                 setting a desired temperature range for a hard disk drive that is being tested;

4                 upon determining that a temperature inside the hard disk drive is below the desired  
5    temperature range, changing a mode of operation of the hard disk drive from a first mode of  
6    operation to a second mode of operation, wherein the first mode of operation generates less heat  
7    than the second mode of operation; and

8                 upon determining that the temperature inside the hard disk drive is above the desired  
9    temperature range, changing the mode of operation of the hard disk drive from the second mode  
10   of operation to the first mode of operation.

1    2. The method of claim 1, wherein the first and second modes of operation are seek modes,  
2    and wherein the first seek mode that is slower than the second seek mode.

1    3. The method of claim 1, wherein the first mode of operation is an IDLE seek mode and  
2    the second mode of operation is a rapid seek mode.

1    4. A method of claim 1, wherein the first mode of operation has a slower disk rotation speed  
2    than the second mode of operation.

1    5. The method of claim 1, wherein the first mode of operation has a slower clock speed than  
2    a second mode of operation for a processor within the hard disk drive.

1    6. A method for maintaining a steady-state internal temperature inside a housing for a hard  
2    disk drive during testing operations of the hard disk drive, the hard disk drive having two modes  
3    of operation, the method comprising:

4 setting a desired temperature range for a hard disk drive that is being tested;

5 upon determining that a temperature inside the hard disk drive is below the desired  
6 temperature range, changing a mode of operation of the hard disk drive from a first mode of  
7 operation to a second mode of operation, wherein the first mode of operation generates less heat  
8 than the second mode of operation; and

9 upon determining that the temperature inside the hard disk drive is above the desired  
10 temperature range, changing the mode of operation of the hard disk drive from the second mode  
11 of operation to the first mode of operation.

1 7. The method of claim 6, wherein the first and second modes of operation are seek modes,  
2 and wherein the first seek mode is slower than the second seek mode.

1 8. The method of claim 6, wherein the first mode of operation is an IDLE seek mode and  
2 the second mode of operation is a rapid seek mode.

1 9. A method of claim 6, wherein the first mode of operation has a slower disk rotation speed  
2 than the second mode of operation.

1 10. The method of claim 6, wherein the first mode of operation has a slower clock speed than  
2 a second mode of operation for a processor within the hard disk drive.

1 11. A method for rapidly warming up a hard disk drive before testing the hard disk drive  
2 having a first and second mode of operation, the method comprising:

3 setting a desired temperature range for a hard disk drive that is to be tested; and  
4 upon determining that a temperature inside the hard disk drive is below the desired  
5 temperature range, setting a mode of operation of the hard disk drive to a first mode of operation,  
6 wherein the first mode of operation generates more heat than a second mode of operation, until  
7 the desired temperature range is reached.

1    12.    The method of claim 11, wherein the first and second modes of operation are seek modes,  
2    and wherein the first seek mode is faster than the second seek mode.

1    13.    The method of claim 11, wherein the first mode of operation is a rapid seek mode and the  
2    second mode of operation is an IDLE seek mode.

1    14.    A method of claim 11, wherein the first mode of operation has a slower disk rotation  
2    speed than the second mode of operation.

1    15.    The method of claim 11, wherein the first mode of operation has a slower clock speed  
2    than a second mode of operation for a processor within the hard disk drive.

1    16.    A computer program product, residing on a computer usable medium, for controlling  
2    temperature in a hard disk drive during testing, the computer program product comprising:  
3                program code for setting a desired temperature range for a hard disk drive that is being  
4    tested;

5                program code for, upon determining that a temperature inside the hard disk drive is below  
6    the desired temperature range, changing a mode of operation of the hard disk drive from a first  
7    mode of operation to a second mode of operation, wherein the first mode of operation generates  
8    less heat than the second mode of operation; and

9                program code for, upon determining that the temperature inside the hard disk drive is  
10   above the desired temperature range, changing the mode of operation of the hard disk drive from  
11   the second mode of operation to the first mode of operation.

1    17.    The computer program product of claim 15, wherein the first and second modes of  
2    operation are seek modes, and wherein the first seek mode that is slower than the second seek  
3    mode.

1    18.    The computer program product of claim 15, wherein the first mode of operation is an  
2    IDLE seek mode and the second mode of operation is a rapid seek mode.

1    19.    A computer program product of claim 15, wherein the first mode of operation has a  
2    slower disk rotation speed than the second mode of operation.

1    20.    The computer program product of claim 15, wherein the first mode of operation has a  
2    slower clock speed than a second mode of operation for a processor within the hard disk drive.